Electronic Version
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Claims

[c1] What is claimed is:

1.A connector device connecting a first information-handling apparatus and a second information-handling apparatus, comprising:

a common jack connected to the first information-handling apparatus;

a plug connected to the second information-handling apparatus, the plug adapted for insertion into the common jack, the plug comprising a first conductive surface and a ground contact, the first conductive surface arranged substantially neighboring to a tip end of the plug;

a first jack contact formed on the common jack for receiving communication signals when engaging with the first conductive surface of the plug;

a memory buffer for receiving the communication signals through the first jack contact, and sending out the communication signals to the first information-handling apparatus when the memory buffer is not empty; and

a control circuit electrically connected to the memory buffer for monitoring a status of the memory buffer, wherein when the memory buffer is not empty, the con-

trol circuit determines that the plug is inserted into the common jack, and when the memory buffer is empty, the control circuit determines that the plug is removed from the common jack.

[c2] 2.The connector device of claim 1 wherein the plug further comprises a second conductive surface disposed between the first conductive surface and a ground contact.

[c3] 3.The connector device of claim 2 wherein the first information-handling apparatus is a stereo audio apparatus and the second information-handling apparatus is a headphone.

[c4] 4.The connector device of claim 3 wherein the first conductive surface of the plug serves as a right channel audio signal contact and the second conductive surface of the plug serves as a left channel audio signal contact.

[c5] 5.The connector device of claim 2 wherein the first and second information-handling apparatuses are connected for exchanging data in one direction or two directions.

[c6] 6.The connector device of claim 5 wherein the first conductive surface of the plug serves as a receive (Rx) signal contact and the second conductive surface of the plug serves as a transmit (Tx) signal contact.

[c7] 7.The connector device of claim 1 wherein the first jack contact is disposed near an inner end of the common jack for being capable of only contacting the first conductive surface of the plug when the plug is inserted into the common jack.

[c8] 8.The connector device of claim 1 wherein the memory buffer is a first-in first-out (FIFO) memory buffer.

[c9] 9.A method of verifying insertion or removal of a plug into a common jack, the plug comprising a first conductive surface, and a ground contact, wherein the first conductive surface is arranged substantially neighboring to a tip end of the plug, the method comprising:
detecting communication signals received by the common jack through the first conductive surface of the plug;
storing the received communication signals in a memory buffer;
sending out the communication signals stored in the memory buffer to the first information-handling apparatus when the memory buffer is not empty; and
monitoring the status of the memory buffer to determine whether the plug is inserted into or removed from the common jack, wherein when the memory buffer is not empty, it is determined that the plug is inserted into the

common jack, and when the memory buffer is empty, it is determined that the plug is removed from the common jack.

[c10] 10.The method of claim 9 wherein the plug further comprises a second conductive surface disposed between the first conductive surface and a ground contact.

[c11] 11.The method of claim 10 wherein the common jack is located in a stereo audio apparatus and the plug is electrically connected to a headphone, thereby sending audio signals fro the stereo audio apparatus to the headphone.

[c12] 12.The method of claim 11 wherein the first conductive surface of the plug serves as a right channel audio signal contact and the second conductive surface of the plug serves as a left channel audio signal contact.

[c13] 13.The method of claim 10 wherein the plug connects to the common jack for exchanging data in one direction or two directions.

[c14] 14.The method of claim 13 wherein the first conductive surface of the plug serves as a receive (Rx) signal contact and the second conductive surface of the plug serves as a transmit (Tx) signal contact.

[c15] 15.The method of claim 9 wherein the memory buffer is a first-in first-out (FIFO) memory buffer.

[c16] 16.A connector for electrically connecting a first information-handling apparatus to a plug connected to a second information-handling apparatus, the plug comprising a first conductive surface and a ground contact, the first conductive surface arranged substantially neighboring to a tip end of the plug, the connector comprising:

a common jack connected to the first information-handling apparatus;

a first jack contact formed on the common jack for receiving communication signals when engaging with the first conductive surface of the plug;

a memory buffer for receiving the communication signals through the first jack contact, and sending out the communication signals to the first information-handling apparatus when the memory buffer is not empty; and

a control circuit electrically connected to the memory buffer for monitoring a status of the memory buffer, wherein when the memory buffer is not empty, the control circuit determines that the plug is inserted into the common jack, and when the memory buffer is empty, the control circuit determines that the plug is removed from the common jack.

[c17] 17.The connector of claim 16 wherein the plug further comprises a second conductive surface disposed between the first conductive surface and a ground contact.

[c18] 18.The connector of claim 17 wherein the first information-handling apparatus is a stereo audio apparatus and the second information-handling apparatus is a headphone.

[c19] 19.The connector of claim 18 wherein the first conductive surface of the plug serves as a right channel audio signal contact and the second conductive surface of the plug serves as a left channel audio signal contact.

[c20] 20.The connector of claim 17 wherein the first and second information-handling apparatuses are connected for exchanging data in one direction or two directions.

[c21] 21.The connector of claim 20 wherein the first conductive surface of the plug serves as a receive (Rx) signal contact and the second conductive surface of the plug serves as a transmit (Tx) signal contact.

[c22] 22.The connector of claim 16 wherein the first jack contact is disposed near an inner end of the common jack for being capable of only contacting the first conductive surface of the plug when the plug is inserted into the

common jack.

[c23] 23.The connector of claim 16 wherein the memory buffer is a first-in first-out (FIFO) memory buffer.